0639-93409

AR0011

A. A. APPEL
Superintendent
Sewer Maintenance Division
Room 750, City Hall
Los Angeles 12, California

April 1 1953

W-8427

Dear Sir:

REQUEST FOR INDUSTRIAL WASTE PERMIT

Firm Name: Montrose Chemical Corporation of California

Address (Mailing): P.O.Box 147, Torrance, Calif Phone No. Nevada 6-2449

Address (of installation): 20201 So. Normandie, Los Angeles, California

Type of industry: Chemical Manufacture

Character of operation producing waste: See attached report

Types of chemicals, solvents, cleaning compound, oils or other substances contained in liquid waste discharge:

See attached report

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Approximate gallonage of waste liquids (see attached report /) per (/) hour day.

Additional information:

See attached report

MONTROSE CHEMICAL CORP. OF CALIFORNIA

By _____, Plant Supt.
(Applicant's signature)

DEPARTMENT OF PUBLIC WORKS
CITY OF LOS ANGELES
BUREAU OF ACCOUNTING
APR 2 - 1953
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Fee of $10.00 enclosed herewith payable to the Department of Public Works.

SUPPLEMENT TO REQUEST FOR INDUSTRIAL WASTE PERMIT

Character of Operation Producing Waste: -

and

Approximate Gallonage of Waste Liquids per 24 Hour Day: -

Montrose Chemical Corporation of California drawings No. 966-1, 2 and 3 attached show the various areas to be drained to the sewer and the proposed new sewer line and neutralizing tanks.

The character of the individual operations and approximate gallonage of waste liquids are listed below under the various areas involved. (Refer to Dwg. No. 966-1)

Area "A" - Steam and Refrigeration Plant

Waste liquids will be produced by: -

1) Boiler blowdown and boiler washout. The blowdown is usual alkaline to a pH of around 11 and the washing water will vary from 11 down to about 7. Blowdown is approximately 4000 gallons/day. Washing is done once in about three months and will run about 15,000 gallons for one day.

2) Evaporative Condenser Washdown. One condenser is washed down with 10% sodium acid sulfate once each week (usually on Wednesday). Total waste is about 2000 gallons containing an average of 1% $NaHSO_4$.

3) Draining of Circulating Brine. Once in about three months 20,000 gallons of 20% sodium chloride brine containing 0.05% sodium dichromate is drained and the tank and system flushed with about 40,000 gallons of water. Total waste is about 60,000 gallons of an average of 6% NaCl over a 24 hour period.

4) Water Softeners. These are regenerated twice each day and will discharge a waste of approximately 4,000 gallons containing 500# of a mixture of magnesium, calcium and sodium chlorides.

5) Miscellaneous. Various small amounts of water and brine treating chemicals, et cetera, are spilled and are flushed down daily. This probably represents 1,000 gallons daily.

Area "B" - Acid Handling Area

Various strengths of sulfuric acid are blended in this area to produce the proper mixtures for manufacturing operations. Although all acids are in closed tanks and pipes, there is unavoidable spillage from samples, pumps and, occasionally, leaking

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pipe lines. It is necessary to flush this area daily with probably 1,000 gallons of water which will contain an estimated 1% sulfuric acid.

Area "C" - Process (Reactor) Line

This area contains a battery of reactors in which the basic reaction forming DDT is accomplished. This reaction involves the use of strong sulfuric acid and requires very frequent sampling and testing which results in some spills. Also ten pumps contribute considerable acid leakage. This area is washed down daily with about 1,000 gallons of water which will contain probably 2% sulfuric acid at times.

Area "D" - DDT Washing 17

The following wastes are produced in this area: -

1) Dilute caustic washing of DDT. After the bulk of the strong spent acid is removed and pumped to storage (disposal by hauling to sea), the DDT is washed with dilute caustic and water to remove the last traces of acid. This produces approximately 50,000 gallons of waste containing about 500# of sodium hydroxide and about 1000# of sodium sulfate.

2) Steam Jet Fume Scrubber. This unit uses a coke packed water spray column to remove acid fumes and discharges approximately 80,000 gallons/day containing about 720# of sulfuric acid.

3) Recirculating Water Jet Fume Scrubbers. Although these jets are located throughout the Plant, the recirculating pump and make-up tank are located in this area. This system will not be completed for a few weeks and it is not known how much acid or blowdown will be necessary. However, it is estimated that this will be in the order of 5000 gallons of a 1% sulfuric acid per day.

Area "E" - Acid Storage Area

Except for three pumps and occasional pipe failure, there will be very little acid loss from this area. It is estimated that about 1000 gallons of water a day will be used for flushing down.

Area "F" - DDT Rework Area

This area contains a plate and frame filter press used for removing decolorizing carbon from monochlorobenzene solutions of DDT. Although there is normally no loss from this unit, there are occasions when a cloth blows out and as much as 10 gallons of monochlorobenzene containing 30% DDT may be lost. This is estimated to happen about once a week. It is estimated that 1000 gallons of water a day will be used for flushing down this area.

In addition, water is used for washing the monochlorobenzene solution and will result in approximately 5000 gallons/day.

In the final separation of the recovered monochlorobenzene approximately 3000 gallons of waste water are produced.

The various areas listed above will all drain to the two neutralizing tanks and represent a total daily steady load of about 156,000 gallons with a surge load of as much as 233,000 gallons in a single day.

This Plant operates entirely on water from the central cooling tower which makes it possible to eliminate any cooling tower blowdown. This, however, makes it mandatory that the cooling tower water be relatively free of acid. Certain acid coolers have, although very infrequently, developed leaks which have necessitated discharging this contaminated cooling water to sewer for as long as three hours to allow for shutdown in order to make repairs.

This momentary surge may be as high as 300 gpm, which would, if continued for a 24 hour period, represent an additional load of 432,000 gallons.

Additional Information
Proposed Neutralizing Plant

The various waste liquids from the Montrose Plant contain various soluble salts, sulfuric acid and sodium hydroxide. The combined effluent is completely soluble containing an excess of sulfuric acid. This excess is estimated to be roughly equivalent to 1000 pounds of sodium hydroxide per day.

As shown on the three drawings attached, it is proposed to run this waste to two approximately ~~12,000~~ 13,000 gallon neutralizing tanks connected in series. Arrangements are provided for parallel flow to allow for repairs when they become necessary. These two tanks will be agitated by compressed air and the excess sulfuric acid neutralized by the addition of a sodium hydroxide solution. This solution will be fed under pump pressure through a pipe and automatic control valves to each of the two tanks. Two Beckman - Bristol pH recorder controllers will be installed, one for each tank to operate the automatic control valves. The first tank will be controlled at some intermediate pH, probably 4.0, and because of the heavier load will be subject to some surging. The second tank will be operated as a finishing control to a pH of 7.0, and can be expected to give a steady control because of the relatively light load.

Both pH controllers are equipped with electric warning switches and will be installed to sound an alarm when either meter deviates from control settings.

This dual instrumentation coupled with automatic warning will reduce to a minimum the possibility of control failure.

Stauffer Research Department Connection

Drawing 699-1 shows a proposed connection from the Stauffer Research Department to the proposed new 18" sewer immediately south of the No. 1 Warehouse and about 20 feet east of the No. 3 railroad tracks.

It has not been determined whether the Research Department will wish to make this connection at this time. In the event they decide to make the connection, additional information concerning their industrial waste and treatment arrangements will be submitted for your approval.

If the Stauffer Reaearch connection is not made at the same time the 18" sewer line is laid, Montrose will plan to connect the office sewer to the 18" line at the point of intersection with the present 6" office line. The exact location of this line will be determined when the 18" is laid.

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